



Natural Gas STAR International



Agenda

- 🔥 Background: Natural Gas STAR and Methane to Markets
- 🔥 New Initiative: Natural Gas STAR International
- 🔥 Natural Gas STAR International Benefits
- 🔥 Joining Natural Gas STAR International



Background: Natural Gas STAR and Methane to Markets





Natural Gas STAR Program

The Natural Gas STAR Program is a *flexible, voluntary partnership* between EPA and the oil and natural gas industry designed to *cost-effectively* reduce methane emissions from natural gas operations.



Domestic Natural Gas STAR Partners & Endorsers

- 💧 114 Program partners across all four sectors
 - 💧 Recommended technologies and practices come directly from partner companies and industry experts
- 💧 18 endorser associations, including
 - 💧 American Petroleum Institute (API)
 - 💧 Colorado Oil & Gas Association (COGA)
 - 💧 Domestic Petroleum Council (DPC)
 - 💧 Gas Processors Association (GPA)
 - 💧 Independent Producer's Association of America (IPAA)
 - 💧 Independent Producers Association of Mountain States (IPAMS)
 - 💧 Interstate Oil & Gas Compact Commission (IOGCC)
 - 💧 Petroleum Association of Wyoming (PAW)
 - 💧 Petroleum Technology Transfer Council (PTTC)
 - 💧 Southern Gas Association (SGA)



Methane to Markets

- 💧 White House Initiative launched 16 November 2004, at a Ministerial Meeting in Washington, D.C.
- 💧 Eighteen national governments have signed on as partners, formally declaring their intent to reduce methane emissions from key sources
- 💧 “Project Network” established to involve private companies, multilateral development banks and other relevant organizations in M2M implementation and activities
- 💧 Focus on implementing sector-specific methane capture and use projects and technology transfer to developing countries and countries with economies in transition
 - 💧 **Oil and gas**
 - 💧 Landfills
 - 💧 Coal mines
 - 💧 Agriculture



New Initiative: Natural Gas STAR International





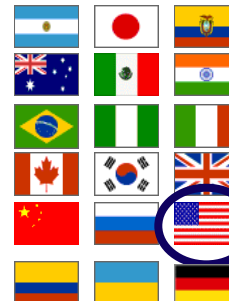
Natural Gas STAR International Program

- Under the Methane to Markets partnership, Gas STAR International is a U.S. led initiative aimed at voluntarily reducing methane emissions from international oil and natural gas operations



Methane to Markets

Oil and Gas Subcommittee





Methane to Markets Partner Countries

- Argentina
- Australia
- Brazil
- Canada
- China
- Colombia
- Ecuador
- Germany
- India
- Italy
- Japan
- Mexico
- Nigeria
- Russia
- South Korea
- Ukraine
- United Kingdom
- United States





Natural Gas STAR International Key Components

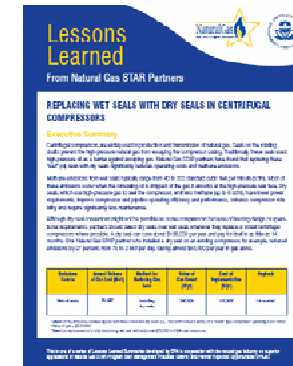
Technology transfer

- Provide technical information and training
- One-on-one assistance to identify and implement cost-effective methane emission reduction projects

Reporting

- Maintain records of voluntary actions

Project Demonstrations



Technical Information

Workshops



Annual Reports



Natural Gas STAR Hosts International & Domestic Workshops

🔥 International

- 🔥 Technology Transfer Workshop & Plant Tour
 - 🔥 Co-hosted by Pemex, Villahermosa, Mexico; April 25-26, 2006
- 🔥 IPIECA Annual Meeting / Technology Transfer Workshop
 - 🔥 September 26, 2006, Washington, DC

🔥 Domestic

- 🔥 Technology Transfer Workshops
 - 🔥 Kenai, AK – May 25, 2006 (ConocoPhillips Alaska)
 - 🔥 Fort Worth, TX – June 6, 2006 (Devon and PTTC)
 - 🔥 Midland, TX – June 8, 2006 (Occidental, PTTC, and NMOGA)
 - 🔥 Hobbs, NM – July 27, 2006 (Targa and GPA)
- 🔥 Annual Implementation Workshop
 - 🔥 Houston, TX – October 23-25, 2006



Methane Recovery Projects

🔥 Potential Gas STAR project examples



Leak inspection and repair



Change compressor maintenance and shutdown practices



Install vapor recovery on storage tanks



Reduced emission completions



Methane Recovery Projects

- 💧 Methane-saving projects are profitable in a number of ways:
 - 💧 Sales value of recovered methane and other hydrocarbons
 - 💧 Lower operating, maintenance, fuel, and capital replacement costs
 - 💧 Installing state-of-the-art, energy-efficient equipment
 - 💧 Reduced maintenance requirements
 - 💧 Potential carbon market value of captured methane
- 💧 Natural Gas STAR International can help partner companies benefit from revenue sources with:
 - 💧 Project feasibility studies
 - 💧 Demonstrations
 - 💧 Project co-funding



Natural Gas STAR International Benefits





Program Benefits for Partner Companies

- 💧 Save time identifying the “right” technologies and practices to reduce methane emissions
 - 💧 Identify projects appropriate for your operating environment
 - 💧 Technical studies and fact sheets based on industry field experiences
 - 💧 Economic analysis tools to estimate financial returns
 - 💧 One-on-one technical assistance
- 💧 Technology Transfer Workshop Series
 - 💧 Build network with industry peers and draw upon their experience and successes
 - 💧 Domestic & international workshops



Program Benefits for Partner Companies

🔥 Enhanced corporate reputation

- 🔥 Environmental message
- 🔥 Public recognition
- 🔥 Improves local air quality
- 🔥 Improves industrial safety
- 🔥 Easy methods to quantify environmental benefits

🔥 Voluntary record of reductions & internal benchmarking capability

- 🔥 Methodology to track and record methane emission reductions
- 🔥 Data to develop internal benchmarks
- 🔥 Flexibility and assistance in preparing methane emissions reduction summary



Joining Natural Gas STAR International





Guide to Participation

- 🔥 Sign the Memorandum of Understanding (MOU)
 - 🔥 Non-binding (voluntary) agreement to evaluate technologies and practices that reduce methane emissions and implement where cost-effective
- 🔥 Submit an Implementation Plan
 - 🔥 Summarize how Natural Gas STAR International Program will be incorporated into operations
 - 🔥 Determine the scope of your participation
- 🔥 Plan annual reporting process
 - 🔥 Document emission reduction activities undertaken
 - 🔥 Retroactive activities will be recognized



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